ABSTRACT

A method of limiting the power applied to a loudspeaker is disclosed, in which both the voltage and current applied to the loudspeaker are measured, and instantaneous power is directly calculated and used to control the level of the input signal that drives the amplifier powering the loudspeaker. When the power applied to the loudspeaker exceeds a prescribed threshold, the input level to the power amplifier is reduced until the measured power falls below the threshold. Also disclosed is a method for indirectly determining the voice coil temperature from the loudspeaker's voltage and current and reducing power to the loudspeaker when the temperature exceeds a prescribed threshold. The power level is actively controlled to prevent damage to the loudspeaker and to minimize audibly objectionable artifacts.